2005 NACo Achievement Award

Building Inventory Application

Montgomery County, Department of Technology Services

The Montgomery County Government, Department of Technology Services - Geographic Information Systems (DTS-GIS) team, in cooperation with the Department of Fire & Rescue Service (DFRS), developed an ArcView GIS based Building Inventory Application (BIA). The BIA is a tool for maintaining building footprints and adding critical information needed by the firefighters responding to a fire. This tool improves DFRS staff efficiency for adding building attributes and building footprints to the County GIS buildings data layer. Two critical building attributes for Fire/Rescue personnel are building address and link to Preplan (if one exists).

Prior to the development of BIA, there was no user friendly way to maintain and update geographic information for the location of new or existing buildings. Consequently, DFRS asked DTS-GIS to create the application to reduce the complexity of creating the data and to provide a sophisticated, yet simple application, to allow DFRS staff to quickly update and maintain a current building footprint data layer. As a result, DTS-GIS developed the BIA to enable staff to quickly find a Montgomery County building based on the input of an address or map tile number. The application was also created to add additional information about the building footprint, such as a floor plan (PDF file name) and address of the building footprint.

The fundamental requirement of the building footprints for supporting fire fighting is that all buildings (and their addresses) must be present on the fire fighters' computer monitors. The BIA was developed to improve DFRS staff efficiency and to provide useful geographic information to the participants in a Public Safety incident for display on E911 dispatch monitor, or in an Automatic Vehicle Locator (AVL) monitor for dispatching and finding an incident. This application extends the ability of DFRS staff to quickly and efficiently access the geographic database information.

The BIA makes use of geographical and attribute information from over 10 County GIS data layers. It includes a tool for displaying (recent) orthophotos, to be used to update and/or add new building footprints as necessary. BIA also uses the State of Maryland's Department of Assessments and Taxation data listings and Maryland-National Capital Park and Planning Commission (MNCPPC) property data listings and plat addresses. Data maintenance staff need only call up the application for adding a new building footprint, adding an address, deleting a footprint that no longer exists or adding a Preplan PDF file name to a building footprint and updating the building inventory data layer.

BIA provides the tools to search, display, edit or update geographic building information, in seconds rather than hours. The properly maintained buildings data is part of the GIS data going into a CAD workstation or a mobile data terminal. The deployed CAD Map enables first responders to locate vital information such as floor plans, standpipes, hydrants, stairwells, and fire escapes. Montgomery County is one of the first few local governments to develop this kind of GIS data service for its Fire/Rescue Service. It could serve as a model for other counties and municipalities who provide geographic information services to their public safety personnel.

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